

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

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In the Matter of)	
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IP-Enabled Services)	WC Docket No. 04-36
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COMMENTS OF POINTONE

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Pursuant to Section 1.2 of the Commission’s Rules, 47 C.F.R. § 1.2, UniPoint Enhanced Services, Inc. d/b/a/ PointOne (hereinafter PointOne) submits these comments in response to the Commission’s *Notice of Proposed Rulemaking* of March 10, 2004,¹ and the *Public Notice* of March 29, 2004,² in the above-captioned matter, seeking comment regarding services and applications that make use of Internet Protocol (“IP”).

I. INTRODUCTION AND KEY PRINCIPLES

Once primarily the province of “technogeeks” and early adopters, Internet Protocol (IP)-enabled services have gone mainstream. Just about every type of communications services company is preparing to or has rolled out some flavor of IP-enabled services, including lesser-known garage innovators, major cable system operators, and even AT&T and the Bell Operating Companies (BOCs). Founded in 1998 with the sole goal of building an Advance IP Communications Network that would

¹ *In the Matter of IP-Enabled Services*, WC 04-36, Notice of Proposed Rulemaking, FCC 04-28 (March 10, 2004) (*NPRM*).

² *Public Notice, Pleading Cycle Established for Comments in IP-Enabled Services Rulemaking Proceeding*, DA-04-888 (March 29, 2004).

support a myriad of different communications applications; PointOne has also deployed many different IP-enabled services and applications and continues to do so. This explosion of IP-enabled products onto the market is transforming the way we communicate and providing increased customer control over the communications experience. During the infancy of IP-enabled services, regulators treated these products as any other enhanced or information service, thereby contributing to the ability of developers to make significant progress and improvement in the applications and services. As the technology has matured and major providers have begun offering their products to the mass-market, it has become clear that the Commission must be proactive and resolve certain regulatory and public policy issues to facilitate the communications revolution promised by the 1996 Act and made real by IP-enabled services.

For many years, regulators responded positively to the plea “don’t regulate us” from IP-enabled service providers. In fact, in the *Stevens Report* (the only statement to be issued by the Commission up until recently regarding IP-enabled voice services – which was intended to be a temporary compass for the communications industry to navigate the IP services landscape) the FCC tentatively concluded that certain types of voice over IP (VoIP) services were “information” services, not subject to “telecommunications” regulation.³ In 1998, the year the *Stevens Report* was released, this tentative conclusion was sufficient to create an “unregulated” and thus fertile environment that encouraged tremendous innovation and investment in IP-enabled services and applications.

³ See *Federal State Joint Board on Universal Service*, Report to Congress, 13 FCC Rcd 11501 (1998) (*Stevens Report*).

However, as consumer demand for IP-enabled services increases, it is understandable that the Commission and state regulatory bodies feel compelled to scrutinize the applicable regulatory regime. Various industry participants, eager to protect important revenue streams or avoid the payment of uneconomic costs, have sought definitive rules to guide their investment decisions. As evidenced by this rulemaking, federal, state, and international policy makers have responded enthusiastically to the requests also in an effort to protect their own revenue streams, as well as the consumers who purchase these disruptive services. Clearly, IP-enabled services interfere with many of the basic ideas underlying the current regulatory structure and the adoption of these services will have an impact on the ability of regulators to meet various statutory mandates. For example the current regulatory structure based on Plain Old Telephony Service (POTS) assumes that the application and the transport layers are closely tied; while VoIP allows the separation and independence of the application (voice communications) and the transport layers.

As a leading world-wide provider of Internet Protocol (IP)-enabled services, PointOne has a significant interest in the Commission developing a rational federal regulatory regime that will govern the delivery of such services. PointOne is a market leading IP services company providing one of the only class of service Voice over IP products available today. PointOne offers “any-to-any” services over its state-of-the-art, Advanced IP Communications Network. What this means is that PointOne transmits and routes traffic between any origination and termination device (including phones, computers, PDAs, wireless devices, etc) without discriminating based on the form or capability of the device. For instance, PointOne can terminate voice traffic entering its

network as an e-mail to a computer, a text message on a PDA, or a voice application on a SIP phone. PointOne and its customers have been direct beneficiaries of the “hands off” approach to regulation that the Commission has followed since it first began reviewing the delivery of computer processing and data services over thirty years ago.

PointOne applauds the Commission for stepping up to the challenge of constructing a fresh regulatory paradigm for the provision of these innovative services. As discussed in the comments below, PointOne urges the Commission to act in a cautious but deliberate manner and adopt a regime that takes into account five important principles:

- First and foremost, the Commission should adopt only those regulations that respect the basic layered approach to IP network design and the engineering principle of extensibility.
- Second, the Commission must safeguard against the incentive and ability of network owners to unreasonably discriminate against or interfere with applications and services riding over the network.
- Third, the Commission must protect consumer access to IP-enabled applications and services and facilitate increased consumer control over the communications experience.
- Fourth, the Commission must permit the IP-enabled services market to develop the best solutions to meet social obligations and impose regulation only when the obligations are not adequately addressed by the market.
- Finally, the Commission must reform the current compensation and universal service mechanisms to remove implicit subsidies and permit carriers to exchange traffic on the public switched network (PSTN) in an economically rational manner.

II. IP-ENABLED SERVICES PROVIDE SIGNIFICANT BENEFITS TO CONSUMERS

At the time the Telecommunications Act of 1996 was adopted, the statutory category of “information services” was a relatively limited one,⁴ encompassing such applications as voice messaging, protocol processing, alarm monitoring, electronic publishing, and Internet access. Less than a decade later, today’s IP-enabled world presents an almost unfathomable array of products. In the realm of IP-enabled voice applications⁵ and services alone, consumers may select from a wide variety of products including:

- Peer-to-Peer (P2P) services such as Free World Dialup and Skype, which are downloadable software programs that facilitate communications over the Internet and totally bypass the PSTN;⁶
- Net2Phone, offering both on- and off-net IP-enabled voice services; and
- Services such as 8x8 (offered by Packet8), Vonage Digital Voice, and StarPoint^{ip} (offered by PointOne), which permit users to make and receive calls from IP endpoints (e.g., terminal adapters and videophones) and also call or be called by any regular telephone on the Public Switched Telephone Network (PSTN).

But the world of IP-enabled applications and services is far broader than real-time, two-way voice communications. Numerous companies provide services such as streaming audio or video webcasts and video conferencing, independently or in

⁴ For discussion of the statutory terms “information service” and “telecommunications service,” see *infra* at n.35.

⁵ As further set forth *infra* at V.A, it is a distinctive feature of the IP environment that IP-enabled “applications” are distinct from the IP infrastructures used to transport them. The term “application” is used in these Comments to denote an IP-enabled service that does not itself “offer any transmission service or transmission capability.” *Petition for Declaratory Ruling that pulver.com’s Free World Dialup is Neither Telecommunications Nor a Telecommunications Service*, WC Docket No. 03-45, Memorandum Opinion and Order, FCC 04-27, at ¶ 4 (rel. Feb. 19, 2004) (*pulver.com Order*).

⁶ Both the Free World Dialup (FWD) and Skype software permit communication over broadband Internet connections only with other users of the same software. See <http://www.pulver.com/fwd/index.html> and <http://www.skype.com/home.html>.

conjunction with IP-enabled voice products.⁷ Websites that enable e-commerce have flourished, and consumers are increasingly making online purchases -- sometimes with a voice connection available -- with confidence that their personal information is secure and that shopping electronically will be as rewarding as in brick and mortar stores.⁸ Even more familiar to consumers are community applications such as instant messaging, e-mail, and web logs (blogs). Such IP-enabled applications and services are pervasive. Indeed, they have become the primary means of communication and information access for many individuals and a central part of our cultural fabric.⁹

The benefits for consumers are, of course, enormous. As the Commission said more than two decades ago, “services which depend on the electronic movement of information can be custom-tailored to individual subscriber needs,” allowing ever-more consumers to benefit from technological innovations.¹⁰ The IP-enabled applications and

⁷ See e.g., Netbriefings, which provides web conferencing and e-collaborative solutions (<http://www.netbriefings.com/index.html>); and Switchmedia, which describes its product as a “rich media email designed to entertain” (<http://www.switchmedia.ca/index.html>).

⁸ The latest data from the [Pew Internet and American Life Project](http://www.pewinternet.org/index.asp) found that two-thirds of the U.S.’s adult Internet users are also online shoppers, corresponding to about 134 million purchasers. In 2000, only about 47.8 percent of those online had made a purchase, according to Washington, D.C.-based Pew. Findings from the group's February study also indicates that about 78 percent of online Americans use the Internet to research a product or service before making a purchase. <http://www.pewinternet.org/index.asp>.

⁹ One example of the impact of IP-based communications on American society is reflected in an April 2004 online survey conducted by IOGEAR, Inc., a leading Wi-Fi connectivity and peripheral manufacturer. IOGEAR discovered that 64% of the respondents admitted to connecting to the Internet when just wearing their undergarments, showing the growing popularity of the wireless lifestyle. IOGEAR posed the question as part of a survey to gauge how and where the public is using Wi-Fi technology, as it becomes more prevalent in today’s society. *IOGEAR Reveals Wi-Fi Surfers Are Wearing Next To Nothing*, IOGEAR Press Release, (May 25, 2004) <<http://www.iogear.com/main.php?loc=pressreleases&prID=126>>

¹⁰ *Amendment of Section 64.702 of the Commission’s Rules and Regulations* (Second Computer Inquiry), Final Order, 77 FCC 2d 384, ¶ 118 (1980) (*Computer II*).

services noted above illustrate that point; IP infrastructure is an efficient, cost-effective, and highly versatile method for delivering “custom-tailored” applications to consumers.

Today, as this *NPRM* recognizes, the combination of the versatile and efficient IP platform with the increasingly widespread availability of broadband promises a virtuous cycle of innovation: IP-enabled applications encourage consumers to demand more broadband connections, which in turn encourages further innovation, which results in more IP-enabled applications.¹¹ This self-feeding “digital tornado” will bring about a dramatic change in which the way America and the world communicates. Significantly, however, this promise will be realized only if the Commission continues to limit regulation of the IP-enabled applications and services, while also ensuring consumer access to the products of their choice.

III. THE COMMISSION SHOULD CONFIRM THAT ALL IP-ENABLED SERVICES ARE JURISDICTIONALLY INTERSTATE

A. The Commission Should Follow the Same Jurisdictional Analysis It Conducted in the *pulver.com Order*

The Commission must confirm that its jurisdictional analysis in the *pulver.com Order* is equally applicable to all IP-enabled services and find that all IP-enabled services are jurisdictionally interstate and subject to exclusive federal jurisdiction.¹² This definitive ruling is necessary to ensure that IP-enabled service providers are able to continue deploying innovative services and applications without the increased costs and burden that could result from attempting to comply with 51 disparate, state-by-state regulatory regimes.

¹¹ *NPRM* at ¶ 5.

¹² *See pulver.com Order* at ¶¶ 17-18.

In the *NPRM*, the Commission seeks comment on the jurisdictional nature of all IP-enabled services.¹³ Although the Commission does not technically reach any tentative conclusions regarding jurisdiction, it recognizes that Internet communications are not bound by geography and that it is often difficult, if not impossible, to determine the origination and termination end points of the IP-enabled communications stream.¹⁴ The Commission structured its jurisdictional inquiry in the instant rulemaking after its analysis and conclusion in the *pulver.com Order* that Free World Dialup (FWD)¹⁵ is jurisdictionally interstate. The Commission seeks comment on whether it should extend the same analysis to IP-enabled services more generally.¹⁶ In its order granting pulver.com’s petition for declaratory ruling, the FCC determines that pulver’s FWD service is an interstate service subject to the Commission’s exclusive jurisdiction. Because all IP-enabled communications with at least one IP endpoint share the geographic characteristics that prompted the Commission’s determination with regard to FWD, all IP-enabled communications are jurisdictionally interstate as well. PointOne encourages the Commission to act quickly and decisively to confirm its exclusive jurisdiction over IP-enabled services.

In the *pulver.com Order*, the Commission sets out two specific circumstances under which a state regulator may exercise jurisdiction over communications services:

¹³ *NPRM* at ¶¶ 38-41.

¹⁴ *Id.* at ¶¶ 4 and 40 (noting that “[p]ackets routed across a global network with multiple access points defy jurisdictional boundaries.”)

¹⁵ It should be noted that PointOne provides PSTN-to-IP bridging services to Free World Dialup and other similar networks.

¹⁶ *See NPRM* at ¶¶ 38-41.

first, when communications “can be characterized as ‘purely intrastate,’” or, second, when “it is practically and economically possible to separate interstate and intrastate components.”¹⁷

Just as the Commission found with respect to FWD service, the first of these two state-jurisdiction situations does not apply generally because it would be impossible to conclude that IP-enabled services are purely intrastate. In the *pulver.com Order*, the Commission reasoned that because the location of FWD “members’ physical locations can continually change,” ... “it is evident that the capabilities FWD provides its members are not purely intrastate capabilities.”¹⁸ The mobility associated with FWD service is a central feature of all other IP-enabled services. Customers can utilize their IP-enabled services and applications from any state or country where they can access an Internet connection. This unique feature practically ensures that IP-enabled services will cross state boundaries at some point in the communications stream. Unlike some local circuit-switched services that are confined to a specific, designated transmission path, IP-enabled services are not purely intrastate; as discussed previously, this is due to the separation and independence of the application (voice) and transport (the POTS copper pair) layers.

The second basis for state jurisdiction is also inapplicable to IP-enabled services generally, because it is practically and economically impossible to separate interstate and intrastate components of an IP communications stream. In the *pulver.com Order* the Commission applied the “mixed-use” doctrine to find that FWD fails the second test for state jurisdiction. When a service carries “mixed” interstate and intrastate traffic that is

¹⁷ *Id.* at ¶ 20.

¹⁸ *Id.*

impractical to segregate by jurisdiction, “the Commission has declared such traffic to be interstate in nature.”¹⁹ As the Commission recognizes in the *NPRM*, “with Internet communications, the points of origination and termination are not always known.”²⁰ The irrelevance of communications end points in an IP stream makes it impossible for the Commission to apply its traditional end-to-end analysis to determine the jurisdictional nature of any IP-enabled services.

Although the Commission suggests the use of geo-location devices, such technology is not currently used and it is not clear to PointOne why the Commission would impose such an extraordinary compliance cost on IP-enabled service providers. As the Commission explained in the *pulver.com Order*, forcing providers to track the bit streams associated with IP-enabled services would negate federal objectives and would “forc[e] changes . . . for the sake of regulation itself, rather than for any particular policy purpose.”²¹ The same is true for other IP-enabled services because “[i]nvestment in such systems would improve neither service nor efficiency,” and would “almost certainly be significant and negative for the development of new and innovative IP services and applications.”²²

¹⁹ *pulver.com Order* at ¶ 22; see also *GTE Telephone Operating Cos.*; GTOC Tariff No. 1; GTOC Transmittal No. 1148, 13 FCC Rcd. 22466 (1998) (*GTE ADSL Order*).

²⁰ *NPRM* at ¶ 40.

²¹ *pulver.com Order* at ¶ 21.

²² *Id.*

B. The Commission Must Preempt State Attempts to Regulate IP-Enabled Services

On May 21, 2003, just days before the first round of comments were due in the instant proceeding, the New York Public Service Commission (NYPSC) brazenly issued a decision finding that Vonage is a “telephone corporation” subject to state jurisdiction.²³ The NYPSC, moreover, stated that state regulation is not preempted by current federal laws and rules. Although in the decision, the NYPSC recognized the benefits of light regulation, it does not specify the parameters of such a light regime. Instead, the NYPSC allows for Vonage to file requests for waivers of requirements it deems inappropriate. While PointOne appreciates the PSCs recognition that many of the current regulatory requirements may not be necessary, the uncertainty created by the waiver process and the possibility of having to navigate a multiple regulatory regimes creates significant disincentives for investment, innovation, and deployment. Consumers in those states that establish the most stringent regulatory regimes likely will suffer the most as it may not be economically feasible for IP-enabled service providers to roll-out their services. As stated by the Commission in the NPRM, “allowing the imposition of state regulation would eliminate any benefit of using the Internet to provide the service.” This premise holds true whether the provider utilizes what is commonly referred to as the “public” Internet or the IP traffic is carried primarily on private IP-enabled networks.

The NYPSC decision highlights the critical need for Commission preemption of state regulation of any IP-enabled services. Despite the NYPSC’s claims that it will

²³ *Complaint of Frontier Telephone of Rochester, Inc. Against Vonage Holdings Corporation Concerning Provision of Local Exchange and InterExchange Telephone Service in New York State in Violation of the Public Service Law*, NYPSC CASE 03-C-1285, Order Establishing Balanced Regulatory Framework for Vonage Holdings Corporation (Issued May 21, 2004) (*NYPSC Vonage Decision*).

move cautiously so as not to harm the development and deployment of this emerging technology, it makes such baseless findings as the Vonage service is not an information service under federal law.²⁴ Moreover, the decision shows a lack of understanding of the enhanced features provided by Vonage and the superior economics and performance capabilities of IP-enabled networks and services. While the NYPSC found that Vonage's claim that it was impossible to separate intrastate and interstate was false because it offered both local and national calling plans, the only support for its conclusion was that Vonage makes two different service offerings available to consumers.²⁵ On many IP networks, however, all IP traffic is originated and/or terminated over the same facilities and is not segregated. For instance, on the PointOne network if it were possible to segregate traffic based on originating or terminating end points, it would only be done for end-user comfort, marketing reasons, or to meet some ill-conceived regulatory mandate as discussed in the section above. Moreover, it would actually be a difficult, costly, and arbitrary distinction. The NYPSC decision has the unfortunate consequence of increasing barriers to entry and discouraging additional deployment of IP-enabled services in New York. As observed by the Commission in the *pulver.com Order*, "[c]ertainly it is this kind of impact Congress considered when it made clear statements about leaving the Internet and interactive computer services free of unnecessary federal and state regulation...."²⁶

²⁴ *NYPSC Vonage Decision* at p.11.

²⁵ *Id.* at p.14.

²⁶ *pulver.com Order* at ¶ 25.

IV. TO THE EXTENT THE COMMISSION HAS JURISDICTION TO REGULATE IP-ENABLED SERVICES, IT SHOULD AFFIRM THE REGULATORY REGIME CREATED IN THE COMPUTER INQUIRY PROCEEDINGS

- A. The Statutory Classifications of Telecommunications and Information Services Govern the Provision of All IP-Enabled Services Over Which the Commission Has Jurisdiction

Although attempting to regulate by squeezing IP-enabled services into existing regulatory boxes is not ideal, PointOne acknowledges that the Commission's authority to restructure the regulatory regime is limited by statutory language and applicable court rulings. Given these limitations, the Commission should be guided by the current regulatory regime while adhering to the forward-looking principles set forth in the introduction. In fact, as discussed below, while certain regulatory categories such as the three types of VoIP services discussed in the *Stevens Report* are no longer relevant, the thriving IP-enabled applications and services market highlights the important role that the current regulatory scheme has and should continue play in the IP-enabled world. Specifically, IP-enabled services have flourished under the complementary goals of (1) a hands off approach to regulation of information services and applications; and 2) safeguards against discrimination by last mile transmission or telecommunications service providers.

These principles, established by the Commission in the *Computer Inquiry* proceedings over 30 years ago, have provided the critical foundation for the growth of IP-enabled services.²⁷ As data processing services became more widespread, the

²⁷ See *Regulatory and Policy Problems Presented by the Interdependence of Computer and Communication Services and Facilities*, Docket No. 16979, Notice of Inquiry, 7 FCC 2d 11 (1966) (*Computer I NOI*); *Regulatory and Policy Problems Presented by the Interdependence of Computer and Communication Services and Facilities*, Docket No. 16979, Final Decision and Order, 28 FCC 2d 267 (1971) (*Computer I*); *Amendment of Section 64.702 of the Commission's Rules and Regulations*

intermingling of computer and data processing with communications services began to create issues for how the communications services were offered. The Commission was concerned that the data processing market continue to grow without regulatory interference. The Commission was equally concerned that those communications service providers that also offered data services had the ability and the incentive to discriminate against unaffiliated data service providers. These concerns prompted the Commission to consider the appropriate regulatory treatment of these services.

In its 1980 *Computer II* decision, the Commission took two critical steps. First, it distinguished “basic” transmission services from “enhanced” services carried over “basic” transmission services, and held that the latter would remain largely unregulated.²⁸ More specifically, the Commission explained that carriers offering “pure transmission capacity over a communications path that is virtually transparent in terms of its interaction with customer supplied information” supply “traditional common carrier services” that could be regulated under Title II of the Communications Act.²⁹ In an attempt to ensure that enhanced services were able to develop independent from traditional transmission services, the Commission also adopted rules that prohibited

(*Second Computer Inquiry*), Docket No. 20828, Tentative Decision and Further Notice of Inquiry and Rulemaking, 72 FCC 2d 358 (1979) (*Computer II Tentative Decision*); *Amendment of Section 64.702 of the Commission's Rules and Regulations (Second Computer Inquiry)*, Docket No. 20828, Final Decision, 77 FCC 2d 384 (1980) (*Computer II*); *Amendment of Section 64.702 of the Commission's Rules and Regulations (Third Computer Inquiry)*, CC Docket No. 85-229, Report and Order, 104 FCC 2d 958 (1986) (*Computer III*) (subsequent cites omitted) (collectively the *Computer Inquiries*).

²⁸ See, e.g., *Computer II* at ¶ 9.

²⁹ *Id.* at ¶¶ 96, 114.

owners of basic transmission facilities from using control of those facilities to discriminate against unaffiliated enhanced services riding over the network.³⁰

In contrast, the Commission found that Congress did not intend enhanced services – defined as “any offering over the telecommunications network which is more than a basic transmission service” – to be regulated under Title II.³¹ The Commission found that this “new” category of services offered such promise that it should be free from regulation to allow for “greater utilization of the telecommunications network through greater access to new and innovative service” tailored to consumer demand.³²

Although these requirements were relaxed to some degree by the “non-structural safeguards” of *Computer III*,³³ the requirement that facilities owners permit unaffiliated information service providers to access their network remains in place.³⁴

Congress essentially codified the distinction between “basic” and “enhanced” services by adopting a similar dichotomy in the Telecommunications Act of 1996, namely “telecommunications” and “information” services.³⁵ In short, the current

³⁰ *Id.* at ¶ 439.

³¹ *Id.* at ¶¶ 97, 123. At the same time, however, the Commission stated that it was not “void of jurisdiction over enhanced services,” but rather could regulate such services under its general authority to regulate “all interstate and foreign communication by wire or radio.” 47 U.S.C. § 152(a).

³² *Computer II* at ¶ 118.

³³ *Id.*

³⁴ Indeed, even apart from *Computer II*’s specific non-discrimination requirements, the decision’s classification of basic service as common carrier service under Title II itself provides protection against unreasonable discrimination. Among the core common carrier requirements is the obligation to offer carriage without “undue or unreasonable preference or advantage to a particular person” and without “undue or unreasonable prejudice or disadvantage.” 47 U.S.C. § 202.

³⁵ *The 1996 Act defined “telecommunications” to mean “the transmission, between or among points specified by the user, of information of the user’s choosing, without change in the form or content of the information as sent and received.”* 47 U.S.C. § 153(43). *The Act then defined “telecommunications service” to mean “the offering of telecommunications for a fee directly to the*

regulatory regime contains important components of the critical common carrier principles of nondiscrimination and the Commission must maintain these principles as it constructs a fresh regulatory paradigm for the provision of IP-enabled services.

B. The Steven’s Report Classifications Are Not the Relevant Legal Standard

In its last examination of the telecommunications and information services distinctions, the Stevens Universal Service Report to Congress (*Stevens Report*),³⁶ the Commission developed three basic models for IP-enabled voice services, but deferred making definitive pronouncements about the regulatory status of the various forms of these services: computer-to-computer, computer-to-phone, and phone-to-phone. As envisioned by the Commission, the computer could be customer premise equipment that converts an ordinary phone signal into IP bits before being placed on a data network, or an IP handset. The Commission made tentative determinations that addressed “emerging services” and emphasized that it could not make definitive pronouncements until it had a more complete record “focused on individualized service offerings.”³⁷

The Commission found that phone-to-phone calls that enter and exit the PSTN in TDM format and involve no net protocol conversion “lack the characteristics of an information service.” The Commission declined to reach a final conclusion, but stated

public, or to such classes of users as to be effectively available to the public, regardless of facilities used.” 47 U.S.C. § 153(46). In contrast, the 1996 Act defined “information service” to mean “the offering of a capability for generating, acquiring, storing, transforming, processing, retrieving, utilizing, or making available information via telecommunications, and includes electronic publishing, but does not include any use of any such capability for the management, control, or operation of a telecommunications network or the management of a telecommunications service.” 47 U.S.C. § 153(20).

³⁶ *Report to Congress*, 13 FCC Rcd at 11543-44, ¶¶ 87-89.

³⁷ *Id.* at ¶ 90.

that such services appear to “bear the characteristics of telecommunications services.”³⁸

In its examination of computer-to-computer IP enabled services, the Commission acknowledged that callers may use software or specialized CPE to place calls over Internet access connection. The Commission concluded that under this scenario, it did not appear as if the service was a “telecommunications” service.³⁹ Moreover, the Commission noted that there are a “wide range of services that can be provided using packetized data and innovative CPE” and that future proceedings would have to determine if its tentative definitions had “accurately distinguish[ed] between phone-to-phone and other forms of IP telephony.”⁴⁰

While these categories may have served a useful purpose during the infancy of IP-enabled voice services, dramatic changes in technology and improvements in the functionalities that IP-enabled service providers are able to deliver to customers has rendered these categories obsolete. PointOne has maintained that these categories are neither legally relevant nor analytically useful given the technological advancements since the time the *Stevens Report* was issued. As explained by PointOne in the AT&T VoIP proceeding,⁴¹ the any-to-any capability of PointOne’s network renders any given device a computer, a PDA, or a phone depending upon the situation, and any attempt to classify a service by reference to the device used to deliver the service could be easily sidestepped. For example, PointOne offers an information service that may originate and

³⁸ *Id.* at ¶ 89.

³⁹ *Id.* at ¶ 87.

⁴⁰ *Id.* at ¶ 91.

⁴¹ *See Petition for Declaratory Ruling that AT&T’s Phone-to-Phone IP Telephony Services are Exempt from Access Charges*, WC Docket No. 02-361 Order, FCC 04-97 (rel. April 21, 2004).

terminate on a “phone” on the PSTN, but that is only made possible utilizing advanced IP technology. This service, available on every communications session on PointOne’s all IP network, enables users to access real-time information such as stock quotes or driving directions, and even enables communication through instant messaging applications. The user accesses the desired information by “dialing” a predefined key combination at any point during the communications stream. Obviously this is just one example of an information service that invalidates the categories delineated in the *Stevens Report*. PointOne encourages the Commission to adopt a regulatory paradigm that maintains the information v. telecommunications dichotomy, but does not depend on outmoded references to the device used to deliver the service.

V. UNDER A LAYERED APPROACH THAT DISTINGUISHES BETWEEN THE APPLICATION AND THE PHYSICAL LAYER, THE COMMISSION CAN ADOPT AN APPROPRIATE, MINIMALLY REGULATORY REGIME FOR IP-ENABLED SERVICES

Although the *Computer Inquiry* regime supports the guiding principles suggested by PointOne – respecting the layered network architecture of the Internet; safeguarding against unreasonable discrimination; and protecting consumer access to applications of their choice -- these rules were developed in an era where voice was not considered a data service and was not severable from the underlying transmission medium. Regulation, therefore, treated voice services one way (as a basic service subject to Title II) and other applications in a different manner (as unregulated enhanced or information services). Regulation based on the specific transmission medium, e.g. wireless, wireline, cable, was logical.

A unique feature of IP-enabled services is that the application, e.g. e-mail, voice, interactive video, etc., is distinct from the physical facility used to deliver it. IP applications are agnostic to the transport medium. It is this feature that promises to transform the way people communicate and give end users ultimate control over their communications experience. IP-enabled services, including voice, are vitiating the vertical “silo”-based form of regulation, and, as the NPRM makes apparent, catalyzing the need for a fresh regulatory approach.

True convergence facilitated by the deployment of IP-enabled services has resulted in a number of commentators and academics proffering a fresh paradigm for regulation.⁴² This paradigm is based on the layered engineering principles that are the foundation of IP networks. Of course, not all industry players agree whether a layered approach to regulation is feasible or enables the Commission to achieve its statutory objectives. PointOne argues however, that the current regulatory debate increasingly complicated since the salad days of VoIP, requires the Commission to reevaluate its approach to regulation.

⁴² See, e.g., Kevin Werbach, *A Layered Model for Internet Policy*, 1 J. ON TELECOMM. & HIGH TECH. L. 37, 39-40 (2002) (Communications policy traditionally has been organized around horizontal divisions between service categories and between geographic regions.); Douglas Sicker, *Further Defining a Layered Model for Telecommunications Policy*, Telecommunications Policy Research Conference (“TPRC”) Paper, at 4 (2002) (Traditionally “regulatory conditions are based on the type of infrastructure on which a telecommunications service is offered.... This regulatory structure is often referred to as the ‘silo model’ in that each network and service is regulated separately from the other.”); Jonathan Weinberg, *The Internet and “Telecommunications Services,” Universal Service Mechanisms, Access Charges, and Other Flotsam of the Regulatory System*, 16 YALE J. ON REG. 211, 213 (“American communications law has developed along service-specific lines, with complex and distinct regulatory structures covering telephony (wired and wireless), broadcasting, cable television, and satellites.”); François Bar & Christian Sandvig, *Rules From Truth: Post-Convergence Policy for Access*, TPRC Paper, at 3 (2000) (“Modern communication policy in most of the world has evolved to treat different media as islands.”); John T. Nakahata, *Regulating Information Platforms: The Challenge of Rewriting Communications Regulation From the Bottom Up*, 1 J. ON TELECOMM. & HIGH TECH. L. 95, 100 (2002).

As explained above, the *Computer Inquiry* proceedings established the original layered approach to regulation by separating the basic transmission network from the information service being provided over the transmission service. The Commission can use this early model to structure a fresh regulatory paradigm for the regulation of all IP-enabled services. A layered approach to regulation will enable the Commission to apply the same or similar regulations to similar services or functionalities without regard for the technology platform or legacy regulation resulting from use of that platform.

Although the publications cited herein confirm that there is some debate in academia regarding the number and functionality of the various layers, there is significant agreement on two basic principles that should be of relevance to the Commission: 1) in every model, the physical layer providing transmission services is distinct from all other layers; and 2) applications and content ride at the top of the layered model. Dividing the model based on horizontal functionalities allows the Commission to target regulation consistent with network design and minimize the impact of regulation on the layers above or below that which is regulated. For each type of regulation the Commission deems necessary, it can look at each layer of the network and examine whether market power dictates economic regulation or the functionality provided at the layer can best meet a particular social imperative.

PointOne suggests that the Commission follow the simplified model proposed by Douglas Sicker in “Applying a Layered Policy Model to IP Based Voice Services.”⁴³ The model not only separates the application and content layers from the transmission

⁴³ Douglas C. Sicker, *Applying a Layered Policy Model to IP Based Voice Services*, Proceedings of the 36th Hawaii International Conference on System Sciences (HISCC '03) (Sicker).

layer, but it also divides the transmission layer into two separate components: access and transport, as shown in the model below.⁴⁴

Content
Applications
Transport
Access

As explained by Sicker, as well as Richard Whitt in “A Horizontal Leap Forward: Formulating A New Public Policy Framework Based on The Network Layers Model,”⁴⁵ separation of the access network from the transport network is critical to ensuring that this model accurately reflects market power and the economics associated with interconnection and network access for those entities such as ISPs that are not entitled to section 251 type interconnection.⁴⁶

Another attractive feature of this layered model is that it will assist the Commission in appropriately targeting regulation. The Commission’s disturbing characterization in the NPRM of IP-enabled services fails to distinguish between the layers or the various functionalities. In fact, the Commission goes so far as to lump together both applications and services in its definition of “IP-enabled services.”⁴⁷ A layered approach recognizes that policy goals may impact the application layer in a manner different from the transport and access layers. As stated previously, the

⁴⁴ *Id.* at p.5.

⁴⁵ Richard Whitt, “*A Horizontal Leap Forward: Formulating A New Public Policy Framework Based on The Network Layers Model*,” MCI Public Policy Paper, March 2004 (Whitt)

⁴⁶ See Sicker at p.5; *see also* Whitt at p.26 and pp. 58-59.

⁴⁷ *IP-Enabled Services NPRM* at n.1.

Commission’s historical approach to information services has allowed the development of a competitive and vibrant application services market. On the other hand, there are still significant barriers to entry in the access market. As a result, there remains a need for continued regulation of the access network separate from applications to ensure proper incentives for interconnection and nondiscriminatory access for applications, as well as physical network deployment incentives. Some of these critical policy goals and how to implement them in under a layered approach are discussed in greater detail below.

A. The Commission Must Confirm that Application Services Will Remain Largely Unregulated

IP-enabled applications that ride over the physical network are separate from the physical network and are not “telecommunications” services. Given the legal structure that binds the FCC today, IP-enabled applications, including voice, fit squarely in the information services category, and must be free from Title II regulation. Similarities between the function provided by an IP-enabled application and a circuit-switched service do not compel the Commission to begin imposing Title II regulation on the application. Instead, the Commission must continue to recognize that in the IP-environment end-user applications are distinct from the transmission medium and that regulation of the applications layer is generally undesirable.

In the *pulver.com Order*, the Commission concluded the FWD is an unregulated information service, and stated that “to rule otherwise would effectively apply a regulatory paradigm that was previously developed for different types of services, which were provided over a vastly different types of network.”⁴⁸ To apply legacy

⁴⁸ *pulver.com Order* at ¶ 19.

telecommunications regulation on IP-enabled applications could have the untoward effect of “eliminating an innovative service offering ... that promotes consumer choice.”⁴⁹

B. The Commission Must Reaffirm the Basic Rule of No Unreasonable Discrimination of Common Carriage and Continue to Ensure Access to the Physical Access Layer

As stated above, it is beyond dispute that the legal recognition of the common carriage characteristics of pure transmission facilities, and the resulting prohibition on unreasonable discrimination in the offering of applications and services over these facilities have produced extraordinary benefits for consumers. IP-enabled applications, like all information services, are delivered to the consumer over physical networks that the owner may have no incentive to make available indiscriminately to the public. Despite the offering of these services in a package that bundles both the application and the access services, it does not necessarily follow that in every instance these applications are “inextricably linked” to the access service such that the access service must no longer be offered on a nondiscriminatory basis.

In its *Computer II* decision the FCC clarified how basic common carrier obligations extended to a world where providers were combining basic telecommunications services with enhanced, computer based-services. The FCC required facilities-based carriers (which at the time included both the pre-divestiture AT&T and MCI) to make the underlying telecommunications components of information services generally available to other information service providers under tariff.⁵⁰

⁴⁹ *Id.*

⁵⁰ *Computer II* at p.475.

The core issue in *Computer II* was the extent to which a common carrier could use its control of the physical layer of the network to control: (a) what consumer premises equipment (CPE) could be attached to the network; and (b) the applications and content -- together termed "enhanced services" -- that ride over that network.

When the Commission in *Computer II* required all facilities-based carriers that provide enhanced services to purchase the transmission according to tariffed rates, terms and conditions, *it created a regulatory compulsion that transmission component or physical layer be offered generally to the public*. In that manner, "other offerors of enhanced services would likewise be able to use such a carrier's facilities under the same terms and conditions."⁵¹ Thus, by creating a regulatory compulsion that transmission be offered generally to the public, the Commission made all transmission provided by facilities-based common carriers into "common carrier" services under the first prong of the *NARUC I* test for common carriage.⁵²

There are some who argue that if the transmission service is IP-enabled, the physical network owner no longer has an obligation to offer the access as a service indifferently to others.⁵³ While such an argument might be compelling in markets where

⁵¹ *Id.*

⁵² See also *Nat'l Assn. of Regul. Util. Comm'rs v. FCC*, 525 F.2d 630, 640 (D.C.Cir. 1976), *cert. denied*, 425 U.S. 992 (1976)(*NARUC I*)(a carrier may be a common carrier if there is a regulatory compulsion to provide service indifferently to the public).

⁵³ See *Petition of SBC Communications Inc. for Declaratory Ruling* (filed Feb. 5, 2004) (defining "IP platform services" to include networks relying on IP, the capabilities and functionalities of those networks, and services and applications utilizing those networks to facilitate communications). SBC has also filed a petition seeking forbearance from application of Title II regulations in the context of "IP platform services." See *Petition of SBC Communications Inc. for Forbearance*, WC Docket No. 04-29 (filed Feb. 5, 2004). The Commission has solicited public comment on that petition. See *Pleading Cycle Established for Comments on Petition of SBC Communications Inc. for Forbearance Under Section 10 of the Communications Act from Application of Title II Common Carrier Regulation to "IP Platform Services,"* WC Docket No. 04-29, Public Notice, DA 04-360 (rel. Feb. 12, 2004).

entry barriers are low and therefore the ability and incentive to engage in unreasonable discrimination is minimized, the proposition is fundamentally flawed when applied generally to all IP-enabled communications. If the Commission were to remove this compulsion to offer the underlying transmission service as an access service to third parties indifferently, a provider that is also a common carrier with respect to other services would be free to treat this IP-enabled transmission as a private service, and either offer it only to itself or to a few others selected and subject to highly individualized terms. The service would only be a common carrier service if the provider *chose* to offer it indifferently to the public.⁵⁴

Clearly, allowing a provider to choose whether or not to provide the service to the public generally puts greater power and control over the applications riding on the network in the hands of the provider, rather than the consumer. This power may be very significant because, in the absence of treating underlying access service as a common carrier service, there is no protection against unreasonable and undue discrimination. The end of a prohibition on unreasonable discrimination could, in effect, mean the end of the public network for broadband and IP-enabled applications. This would mean that physical access network operators could determine what content, services, and applications were available to consumers – and on what terms and conditions.

The basic conclusion that IP-enabled applications and services, even when combined with a telecommunications, are information services, does not preclude the Commission from maintaining the basic common carrier obligation to make the underlying access facility available as a service on a nondiscriminatory basis. In fact, the

⁵⁴ *NARUC I*, 525 F.2d at 640; 47 U.S.C. 153(44)(a telecommunications carrier is a common carrier "only to the extent it is providing telecommunications services").

FCC is compelled by the Communications Act, which codified these nondiscrimination obligations, to prohibit the network operator from unreasonably and unduly controlling what is available to consumers and others on the Internet. By adhering to the basic rule of nondiscrimination the FCC can ensure that packet and content neutrality remains a central feature of IP-enabled communications.⁵⁵

VI. THE COMMISSION SHOULD ENABLE MARKET DRIVEN SOLUTIONS TO SOCIAL IMPERATIVES

In the NPRM, the FCC acknowledges the importance of guaranteeing and implementing vital social objectives such as public safety, disability access, and lawful intercept, as voice applications increasingly migrate to IP platforms.⁵⁶ At the same time, the Commission recognizes that the innovation that empowers consumers and brings them tremendous choice is a direct result of the regulation-free environment in which these applications have developed.⁵⁷ Although some may perceive a tension between the FCC's charge to ensure these social policy goals are met and its desire to maintain a minimally regulatory environment for IP-enabled services, the competitive IP industry has

⁵⁵ Krim, Jonathan, "Will Providers Provide Equally," Washington Post, (May 27, 2004) <<http://www.washingtonpost.com/wp-dyn/articles/A58685-2004May26.html>> Citing a Yankee Group report regarding the dramatic impact net neutrality could have on the provision of IP-enabled voice services. According to the Post, analysts in the report speculate that network operators have the incentive and ability to unreasonably or unlawfully discriminate against independent providers in order to capitalize on their investments.

PointOne recognizes the right of network operators to provide various levels of quality of service or bandwidth subject to different pricing structures such as service tiers. Moreover, network operators have the right to ensure that their network is being used in a lawful manner. To the extent these commercial and security arrangements are considered discriminatory, PointOne contends that such discrimination is reasonable and not unlawful.

⁵⁶ *NPRM* at ¶ 35. The FCC notes that it will address issues relating to CALEA compliance in a comprehensive rulemaking to address law enforcement's needs relative to CALEA rather than as part of the instant rulemaking. *NPRM* at ¶ 35, n.158.

⁵⁷ *NPRM* at ¶ 1-2

a proven track record of developing solutions to meet these imperatives without being required to do so explicitly by regulation. PointOne acknowledges that some in the marketplace may choose not to comply voluntarily with industry self-prescribed standards or best practices. Regulation, however, does not always persuade these so-called “bad actors” to comply. The FCC should not focus on the exceptions, but instead should find persuasive the many examples of the IP industry voluntarily attempting to meet important social objectives.

In addition to a fundamental awareness of the importance of these goals, the competitive nature of the IP market and consumer demand has and will continue to drive the development of innovative solutions for ensuring access to emergency services as well as meeting other important social imperatives. As the examples below demonstrate, the industry is designing applications and network functionalities to address social issues. It is important that the FCC recognize that by allowing industry to develop voluntary solutions rather than imposing specific technical requirements, the IP industry will also be able to meet other customer requirements, such as specific disability access needs like IP relay services, while at the same time preserving the end-to-end, layered architecture of the Internet and the engineering principle of extensibility.

A. Access to Emergency Services

Few would dispute that the public benefits of emergency calling capabilities are tremendous. When coupled with the cost savings inherent in the delivery of applications over IP platforms and the potential enhanced capabilities that IP applications and platforms offer, it should be apparent to the Commission that the proper incentives exist to compel the IP industry to meet the emergency response needs of consumers. In fact,

the industry has been working actively to bring enhancements to market and resolve technical issues such as the delivery of critical call-back and location information.

Over two years ago, the National Emergency Number Association (NENA) began an effort to work with the IP industry to support a forward-looking E911 service that could be based on IP applications and platforms.⁵⁸ In addition, standards development organizations such as the Alliance for Telecommunications Industry Solutions' (ATIS) Emergency Services Interconnection Forum in conjunction with NENA have devoted considerable resources to solving potential technical issues associated with IP-enabled services and enhanced 911 features.⁵⁹ The IP industry has continued to work in cooperation with NENA and ATIS to address these technical issues while ensuring that innovation is not harmed. The result has been agreement on many basic principles such as a preliminary time line for meeting certain requirements as well as recognition of the need to coordinate closely with relevant public safety answering points (PSAPs) when deploying IP-enabled services with 911 capabilities.⁶⁰

B. CALEA Compliance

Although the FCC has initiated a separate comprehensive rulemaking to resolve “outstanding issues associated with the implementation of the Communications Assistance for Law Enforcement Act (CALEA),” it is useful for the Commission to

⁵⁸ See http://www.nena.org/9-1-1-TechStandards/future_path_plan.htm

⁵⁹ See *ATIS Responds to VoIP Challenges in Reaching 911: Launches New committee to Develop Technical Solution for IP Based Systems*, ATIS Press Release (Feb. 2, 2004). <http://www.atis.org/PRESS/pressreleases2004/020204.htm> (announcing the establishment of a new IP Coordination Committee to contribute to the planning, development, and architectural design of an overall IP-based Enhanced 911 system.)

⁶⁰ See *Public Safety and Internet Leaders Connect on 911*, Joint VON Coalition – NENA Press Release (Dec. 1, 2003) http://www.von.org/usr_files/VOIP%20press%20release%20FINAL%20112803

recognize here that IP-enabled providers and vendors have been working willingly with law enforcement to satisfy interception orders as well as to resolve technical issues related to CALEA compliance in a packet-mode network.

Significantly, the IP industry, working cooperatively with the FBI, developed a standard for lawful intercept in soft-switch-based networks without technical direction or specific regulatory mandates. In August 2003, the International Packet Communications Consortium (IPCC) announced the publication of an informational report entitled, “Lawfully Authorized Surveillance for Softswitch-based networks.”⁶¹ The IPCC contributed this informational report to ATIS Subcommittee T1S1 to develop a technical standard for the creation of CALEA “safe harbor” for softswitch-based providers. The standard developed by subcommittee T1S1, which defines the interfaces between IP network providers and Law Enforcement Agencies (LEAs), was adopted in January 2004 as an official ANSI standard.⁶²

Additionally, while there has been significant focus on the ability of IP-enabled providers to comply with CALEA requirements, the most recent Wiretap Report to Congress shows that the increasing use of IP-enabled communications does not hinder

⁶¹ See IPCC Leads the Industry in Defining the First Set of CALEA Safe Harbor Requirements for Packet Communications Networks, August 12, 2003 <<http://www.softswitch.org/newspr/news53.asp>>

⁶² See ATIS Document Center, *Lawfully Authorized Electronic Surveillance (LAES) for Voice over Packet Technologies in Wireline Telecommunications Networks*, Doc. No. T1.678-2004 (adopted Jan. 2004) <https://www.atis.org/atis/docstore/doc_display.asp?ID=2585> (This standard defines the interfaces between a Telecommunications Service Provider (TSP) and a Law Enforcement Agency (LEA) to assist the LEA in conducting lawfully authorised electronic surveillance for Voice over Packet (VoP) technologies in Wireless Telecommunications Networks. This version of the standard provides support for VoP services providing basic SIP call control and basic H.323 call control for IP. Future versions of the standard may address other protocols and technologies, such as MGCP, MEGACO/H.248, ATM, and MPLS. This document provides the mechanisms to perform lawfully authorised electronic surveillance of Voice over Packet subject to the appropriate legal and regulatory environment. It is not the intent of this document to imply or impact any pending CALEA regulatory decisions related to Voice over Packet.)

law enforcement authorities in their ability to intercept critical communications. Not only was the number of wiretap authorizations for computer communications minimal compared to the total number of authorizations, but there was also an increase in the number of wiretaps installed and considerable success in the number of communications intercepted.⁶³

These examples of voluntary industry compliance demonstrate why valid security and safety concerns do not compel the FCC to improperly classify IP-enabled applications as telecommunications services for the purpose of achieving certain social policy goals.

C. Disability Access

The relationship between the deployment of IP-enabled services and the ability of people with disabilities to access and take full advantage of these communications advancements is an area that recently has received considerable comment and is the focus of justifiable concern. It is reasonable to assume that the high cost of providing certain disability access solutions may deter some from developing and deploying services that adequately meet the needs of consumers with speech and/or hearing impairments. The reality is that IP-enabled applications can provide innovative solutions to many disability access issues. The Commission must not stifle these innovations by prescribing specific technical requirements or trying to squeeze IP-enabled applications into requirements

⁶³ Out of 1,442 wiretaps authorized in 2003 for both federal and state law enforcement, basic telephone wiretaps were the most common form of surveillance, accounting for 93 percent of all wiretaps. A grand total of 12 authorizations (less than one percent) involved electronic wiretaps of computer communication. *Report of the Director of the Administrative Office of the United States Courts on Applications for Orders Authorizing or Approving the Interception of Wire, Oral, or Electronic Communications* (2003 Wiretap Report), issued April 30, 2004, <<http://www.uscourts.gov/wiretap03/contents.html>>

designed for circuit-switched facilities. Instead, the Commission should use its authority to adopt rules that encourage cooperation and investment and ensure that providers are eligible to recover the costs of providing these services from the Interstate Telecommunications Relay Services (TRS) fund.⁶⁴

The success of IP relay services provides an excellent example of how the disabilities community can work with the IP-enabled services industry to develop innovation solutions to meet specific communications needs. In 2002, in response to a petition filed by WorldCom, the Commission ruled that IP Relay is eligible for reimbursement from the Interstate TRS fund.⁶⁵ The history of that proceeding shows that WorldCom developed its IP Relay service to meet the needs of people who are deaf, hard of hearing, or have difficulty speaking;⁶⁶ WorldCom was not compelled by statute or

⁶⁴ 47 U.S.C § 225. TRS enables an individual with a hearing or speech disability to communicate by telephone or other device with a hearing individual. This is accomplished through TRS facilities that are staffed by specially trained communications assistants (CAs) using special technology. The CA relays conversations between persons using various types of assistive communication devices and persons who do not require such assistive devices. *See generally Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, CC Docket No. 98-67, Report and Order and Further Notice of Proposed Rulemaking, 15 FCC Rcd 5140, ¶ 2 (2000) (*Improved TRS Order & FNPRM*).

⁶⁵ *In the Matter of Provision of Improved Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities, Petition for Clarification of WorldCom Inc.*, CC Docket No. 98-67 Declaratory Ruling and Second Further Notice of Proposed Rulemaking (2002).

⁶⁶ IP Relay functions in a similar manner to traditional TRS except that instead of a TTY, which is generally linked to the PSTN, the text is provided to, and received from, the communications assistant (CA) via the TRS consumer's computer or other Internet-enabled device. *See generally Provision of Improved Telecommunications Relay Services and Speech-To-Speech Services for Individuals with Hearing and Speech Disabilities; Petition for Clarification of WorldCom, Inc.*, CC Docket No. 98-67, Declaratory Ruling and Second Further Notice of Proposed Rulemaking, 17 FCC Rcd 7779 (2002) (*IP Relay Order*). VRS is a telecommunications relay service that allows persons with hearing or speech disabilities who use sign language to communicate with the CA in sign language (rather than by text) through video equipment. A video link allows the CA to view and interpret the party's signed conversation (and vice versa), and then relay the conversation back and forth with the other party to the call (the voice caller). In almost all cases, the video link is provided over the Internet. *See Improved TRS Order & FNPRM*, 15 FCC Rcd at 5152-54, ¶¶ 21-27.

regulation to develop this service. With the Commission's order making IP relay services reimbursable, the major providers of traditional relay services have all deployed an IP-enabled version. Just as all IP-enabled services are available to any user who has access to an IP connection, IP Relay is available to any Internet user. The service enables communication without separate, specialized equipment such as a TTY. As IP applications and services continue to develop, so too does IP Relay service. Today, users are able to make multiple calls simultaneously, conference multiple users, and browse the Internet while making a call.⁶⁷ Some IP Relay providers even enable users to place Video Relay Service (VRS) calls using the IP Relay application so that callers can communicate using sign language and video interpreters.

There are other features of IP Relay services that highlight the superiority of IP-enabled services and applications to meet and exceed disability access requirements. The Commission must encourage partnerships between the disabilities communities and application and network developers. Commission decisions to allow for reimbursement for the provision of IP-enabled services that meet the TRS requirements, as well as the waiver of inapplicable TRS minimum standards will encourage continued investment and deployment in IP-enabled services designed to meet a wide-range of disability access needs.

⁶⁷ See FCC Consumer & Governmental Affairs Bureau, "IP Relay Service," Consumer Fact Sheet <<http://www.fcc.gov/cgb/consumerfacts/iprelay.html>>

VII. THE COMMISSION SHOULD ADOPT A UNIFIED INTERCARRIER COMPENSATION REGIME FOR THE EXCHANGE OF TRAFFIC ON THE PSTN

A. Adoption of a Bill and Keep Regime Would Eliminate Many of the Economic Controversies Associated with the Provision of IP-Enabled Services

In the NPRM, the Commission seeks comment on the extent to which access charges should apply to VoIP or other IP-enabled services. PointOne agrees with the Commission's observation that any service provider that sends traffic to the PSTN should be subject to similar compensation obligations.⁶⁸ It is important, however, that the Commission not simply end the analysis there and impose the current economically irrational compensation scheme on all IP-enabled service providers. The Commission should maintain the current access charge exemption for information service providers while moving forward to adopt a bill and keep compensation regime that requires carriers to recover their costs from end users rather than through carrier-to-carrier payments. This regime would be applicable to all forms of terminating traffic where at least one party is a regulated carrier.⁶⁹

Bill and keep would encourage more efficient network deployment and enable consumers to make more intelligent purchasing decisions. As the Commission observed in the *Intercarrier Compensation NPRM*, “[t]he interconnection regime that applies in a particular case depends on such factors as: whether the interconnecting party is a local carrier, an interexchange carrier, a CMRS carrier, or an enhanced service provider; and

⁶⁸ NPRM at ¶ 61.

⁶⁹ Where neither party is a regulated entity, e.g. both parties exchanging traffic are ISPs, the Commission and the states do not have jurisdiction and the parties must be free to negotiate market-based traffic exchange agreements.

whether the service is classified as local or long-distance, interstate or intrastate, or basic or enhanced.”⁷⁰ This patchwork of various compensation regimes creates significant market distortions and encourages regulatory arbitrage opportunities.

Variations in pricing and economic burdens for the basic functions of transport and termination encourage market entrants to attempt to leverage the economic benefits of a particular classification leading to greater regulatory uncertainty and increased acrimony between various types of service providers. A bill and keep regime would encourage the deployment of IP-enabled services by eliminating the reliance on measurements that are irrelevant in an IP environment: time and distance. This would allow IP-enabled service providers to price their services in a manner that more accurately reflects the incremental cost of providing the service, rather than the cost structures of less efficient circuit-switched networks. PointOne is confident that given the innovative features and superior economics of IP-enabled services, many consumers will subscribe to these services to take advantage of these characteristics, but only if the provider is able to price its product in such a way so as to send accurate pricing signals to the consumer.

PointOne recognizes the political difficulty created by bill and keep. The Commission should not, however, delay these necessary reforms based on this concern. Instead, PointOne urges the Commission to tackle intercarrier compensation and universal service reform simultaneously to ensure that it is able to continue meeting the laudable policy goal of affordable and universal access to communications services. In the interim, the Commission must not impose the current access charge regime, which is

⁷⁰ *Developing a Unified Intercarrier Compensation Regime*, CC Docket No. 01-92, Notice of Proposed Rulemaking, 16 FCC Rcd 9610 at ¶ 5 (2001) (*Intercarrier Compensation NPRM*)

based on uneconomic network structures and implicit subsidies, on IP-enabled service providers. Instead, the Commission should maintain the access charge exemption for information service providers and begin the process of moving access charges towards cost for all providers. Through adoption of a bill and keep compensation regime, the Commission will avoid imposing market distortions and inefficiencies on IP networks and will encourage more efficient interconnection, and network deployment and usage overall.

VIII. THE COMMISSION MUST REFORM UNIVERSAL SERVICE TO REFLECT CURRENT TECHNOLOGICAL CHANGES

The transition to an IP-enabled world, combined with necessary intercarrier compensation reform, demands that the Commission also adopt bold reforms of the current universal service contribution and distribution methodologies. To ensure that local rates remain affordable and providers continue to have incentives to deploy in high cost and underserved areas, the Commission must move away from the irrelevant and outmoded regulatory classifications that currently define the contribution methodology and adopt a system that requires contributions from the market segment that receives the funds intended to subsidize infrastructure deployment. A reformed contribution methodology must be competitively and technologically neutral, nondiscriminatory, and efficient for carriers to administer. Moreover, it must be simple, understandable, and equitable for consumers.

The deployment of IP-enabled services as well as other technological changes are erasing the distinctions between intrastate and interstate services, between telecommunications services, information services and cable services, and between

network services and customer premise equipment (CPE). This blurring of jurisdictional boundaries and technological distinctions makes it difficult to define and audit today's contribution base of interstate telecommunications revenue. The contribution base is increasingly subject to erosion as carriers bundle and integrate services without regard for regulatory classifications or jurisdictional boundaries.

A. A Connections-Based Contribution Methodology is Competitively Neutral, Equitable, Administratively Efficient, and Creates a Sustainable Universal Service System

Although the Commission has opened a separate proceeding intended to reform the contribution methodology for universal service,⁷¹ PointOne takes this opportunity to support one approach that would be consistent with a regulatory scheme based on horizontal layers and would meet the goals set out above. PointOne supports a contribution methodology more compatible with emerging IP-enabled networks that does not require service providers to force innovative new services into old regulatory constructs. Connection-based contribution methodologies such as the numbers-based proposal submitted to the Commission by AT&T and the connections and capacity-based proposal submitted by MCI remedy the systemic deficiencies of the current revenue-based methodology and ensure the long-term viability of the universal service fund. As explained by Whitt, some type of connections-based contribution mechanism is consistent with a layered approach to regulation and recognizes the convergence of

⁷¹ See *Federal-State Joint Board on Universal Service, 1998 Biennial Regulatory Review – Streamlined Contributor Reporting Requirements Associated with Administration of Telecommunications Relay Service, North American Numbering Plan, Local Number Portability, and Universal Service Support Mechanisms, Telecommunications Services for Individuals with Hearing and Speech Disabilities, and the Americans with Disabilities Act of 1990, Administration of the North American Numbering Plan and North American Numbering Plan Cost Recovery Contribution Factor and Fund Size, Number Resource Optimization, Telephone Number Portability, Truth-in-Billing and Billing Format*, CC Docket Nos. 96-45, 98-171, 90-571, 92-237, 99-200, 95-116, 98-170, Report and Order and Second Further Notice of Proposed Rulemaking, 17 FCC Rcd 24952 (2002).

information platforms because it shifts the focus to the physical layer rather than the service or application that is riding on the physical facility.⁷²

A connections or numbers-based assessment ensures equity and competitive neutrality in the dramatically changing telecommunications and information services marketplace. A connections or numbers-based assessment eliminates the impossible task of differentiating service revenues between interstate and intrastate, and between telecommunications revenue and all other revenue. Such an approach would eliminate providers' incentive to structure their service offerings to obtain a regulatory advantage. A connections or numbers-based assessment is more economically efficient because it does not distort customer purchasing decisions and does not add significant administrative costs. Finally, a connection or numbers-based assessment ensures that the universal service contribution base will continue to grow, creating a stable and sustainable fund.

B. Reform of Distribution Mechanisms

Although it is not an Eligible Telecommunications Carrier (ETC) entitled to receive universal service funds, PointOne recognizes the important impact the distribution mechanisms have on incentives for deployment of the most efficient technologies and facilities. PointOne urges the Commission to reform the distribution mechanisms to ensure that the distribution of funds does not have an anti-competitive effect, will keep the fund at reasonable level, and will minimize impact on consumers.

⁷² Whitt at p.60.

Recognizing, as stated above, that the universal service contribution base is inextricably linked to the intercarrier compensation regime, PointOne encourages the Commission to adopt necessary intercarrier compensation and universal service reforms that ensure that carriers are compensated for use of their network from end user customers at forward-looking, cost-based rates; sufficient incentives exist for the deployment of advanced voice and data applications; and the federal universal service fund is sufficient and sustainable.

IX. SUMMARY AND CONCLUSIONS

Internet-protocol, the engineering concept that forms the foundation of the global Internet, has facilitated the realization of many of the promises of the 1996 Act, including increased competition and the deployment of new technologies and services. Congress acknowledged that this dramatic growth in interactive computer services is a direct result of minimal government regulation,⁷³ and provided straight-forward direction to the Commission and state and local governments to allow the Internet to continue to flourish and bring significant benefits to all Americans.⁷⁴ The Internet and IP communications have created a global network of computers, people, and information systems. The statutory goals of competition and innovation are (and have been) best met by following the same principles that facilitated the creation of this global IP network: a set of functional standards or protocols that permit various devices and applications to communicate with each other.

⁷³ 47 U.S.C. § 230(a)(4) & (b)(2).

⁷⁴ 47 U.S.C. § 230 (establishing a federal policy “to preserve the vibrant and competitive free market that presently exists for the Internet and other interactive computer services, unfettered by Federal or State regulation”).

This layered infrastructure was foreshadowed by the Commission's distinction between basic and enhanced services in the *Computer Inquiry* regime and codified in simplistic form by Congress in the 1996 Act in the definitions of telecommunications and information services. As stated by the Commission, allowing the Internet to develop unfettered by traditional telecommunications regulation has resulted in "one of the greatest drivers of consumer choice and benefit, technical innovation, and economic development in the United States in the last ten years."⁷⁵

The Commission should continue in the path it has already established and construct a fresh regulatory paradigm informed by the engineering protocols that are the foundation of IP communications. This layered approach to regulation will ensure that the Commission is able to meet its statutory mandates by appropriately targeting regulation to the functionality that is best able to achieve the policy goal at issue and will result in an increasingly robust and competitive applications market. In the end, consumers will be the ultimate beneficiaries. Not only will they have access to innovative services that will continue to enhance their communications experience, but the economy as a whole will be strengthened by the continued investment in research, development, and deployment that brings these exciting products to market.

⁷⁵ NPRM at ¶ 1.

Respectfully submitted,

/s/

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